METHOD OF DETERMINING THE TOPOLOGY OF
A NETWORK OF OBJECTS

FIELD OF INVENTION:

[0001]   This invention relates to a method of determining
the topology of a network of objects, such as the physical
topology of a network of data communications devices. This
is a divisional of U.S. application 08/749,671 filed
November 15, 1996 which is a continuation-in-part
application of U.S. application 08/599,310 filed February
9, 1996 which is a continuation-in-part of U.S. application
08/558,729 filed November 16, 1995.

BACKGROUND TO THE INVENTION:

[0002]   Operators of many data communications networks
are typically ignorant of the exact topology of the
networks. The operators need to know the exact topology
in order to properly manage the networks, for example,
for the accurate diagnosis and correction of faults.

[0003]   Network managers that do know the very recent
topology of their network do so by one of two methods: an
administrative method and an approximate AI (artificial
intelligence) method.

[0004]   Administrative methods require an entirely up
to date record of the installation, removal, change in
location and connectivity of every network device. Every
such change in topology must be logged. These updates
are periodically applied to a data base which the network
operators use to display or examine the network topology.
However, in most such systems the actual topology
information made available to the operators is usually
that of the previous day or previous days, because of the
time lag in entering the updates. This method has the
advantage that a network device discovery program need
not be run to find out what devices exist in the network.